CHAPTER 5
OTHER ACTIVITIES

5.1 INTRODUCTION

Other activities that may have a relationship to the 10 water service Contractors in the Shasta and Trinity Divisions include the actions described below.

- Implementation of the Bay-Delta Plan
- Completion of water transfer actions
- Completion of the Conformed Place of Use EIR for CVP Water Supplies
- Recommendations for increased instream flows in the Trinity River
- Implementation of the Sacramento and San Joaquin River Basins Comprehensive Study
- Changes in Federal farm programs
- Changes in demand for agricultural products
- Implementation of Yield Increase Plan
- Additional listings of special-status species

A summary of the potential effects of these actions and how they may influence the effects of implementing the alternatives considered in this EA is presented in Table 5-1.

TABLE 5-1
SUMMARY OF CUMULATIVE EFFECTS

Action	Potential Results
Implementation of the Bay-Delta Plan Accord	Changes in Delta inflow and associated instream releases. Improved water supply reliability through the water quality improvement programs and potential development of groundwater and/or above ground storage and/or conveyance facilities
Water Transfer Actions	Water transfers for both CVP and non-CVP water transfers
Place of Use EIR for CVP Water Supplies	Permitting of CVP water service areas currently served with CVP water but outside of authorized Place of Use
Trinity River Studies	Changes in instream flow requirements for Trinity River

TABLE 5-1
SUMMARY OF CUMULATIVE EFFECTS

Action	Potential Results
CVP Operations and Maintenance Agreements	Transfer of operations and maintenance responsibilities to local water user groups under the CVP
Sacramento Water Forum Proposal	Changes in water demands and flow requirements on American River
Changes in Federal Farm Programs	If lands fallowed or retired due to CVP pricing actions continue to accumulate support payments, the net revenue to farmers may increase and the revenue to the Federal Treasury may not increase.
Changes in Demand for Agricultural Products	If changes in demand increase crop value, farmers would be less willing to sell water. If changes in demand decrease crop value, farmers would be more willing to sell water.
Yield Increase Plan	Development of facilities and programs to increase CVP water supplies could reduce impact of shortages.
Future Listings under ESA of Special-Status Species	Initiation of consultation with the Service and National Marine Fisheries Service

5.2 IMPLEMENTATION OF BAY-DELTA PLAN

As a follow-up to adoption of the 1995 Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary, the SWRCB is evaluating alternatives for implementing that plan. The process includes the SWRCB water rights process and the CALFED Bay-Delta Program.

5.3 SWRCB WATER RIGHTS

The purpose of the SWRCB water rights process for Delta water quality and quantity is to develop a methodology to provide adequate flows to meet the Bay-Delta Plan Accord. The SWRCB process is evaluating several alternatives that would require different agencies, including the CVP and SWP, to release water in a manner that protects Delta quality.

This process may increase the amount of water provided by other water rights holders to meet Bay-Delta water quality standards, but it is anticipated that the impacts to the CVP water supply would not be more severe than the impacts presented in the PEIS and this EA. Consequently, operations of upstream projects may change. Because the outcome is not fully developed, a conservative assumption was used in modeling for the PEIS and this EA. It was assumed that the Bay-Delta Accord criteria would be the long-term plan for the Delta. If instream flows provided by the other water rights holders increase, some portion of the CALFED Ecosystem Restoration Program environmental flows could be satisfied by this water rights process, which may reduce the amount of water that the program needs to acquire from willing sellers. It may also reduce the amount of water that the program needs to develop or may allow for

the developed water to be used more effectively in meeting program objectives. Any additional demand on water right holders could decrease the amount of water available for transfer.

5.4 CALFED-BAY DELTA PROGRAM

The CALFED Bay-Delta Program (CALFED Program) is a cooperative effort of 15 State and Federal agencies with regulatory and management responsibilities in the Bay-Delta system. The mission of the CALFED Bay-Delta Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. The CALFED Program began in May 1995 to address the complex issues that surround the Bay-Delta and the CALFED Agencies have completed the Final Programmatic Environmental Impact Statement/Report (EIS/EIR) for the CALFED Bay-Delta Program, including the Preferred Program Alternative. The August 28, 2000, signing of the CALFED Programmatic Record of Decision (ROD) marked the beginning of implementation for the 30-year program and details on implementation during Stage 1 (the first 7 years of the implementation).

The CALFED Preferred Program Alternative includes the following components: Ecosystem Restoration, Watershed Protection, Water Supply Reliability, Water Storage and Conveyance, Environmental Water Account and Commitments, Water Use Efficiency and Conservation, Water Quality Improvements, Water Transfers, Levee System Integrity, Science Program, Establishment of a Governance Structure for Implementation of CALFED, and a Regional Approach to Ecosystem/Water Management.

Many of these programs could improve water supply reliability and water quality for CVP water service Contractors, especially those located south of the Delta. The CALFED Preferred Program Alternative includes the following components to improve water supply reliability and water quality.

- Water Use Efficiency Program (agricultural, urban, and wetland water conservation and water recycling)
- Water Transfer Program
- Conveyance, including South Delta Improvements
- Surface and groundwater storage
- Operational strategies, such as real-time diversion management through use of the Environmental Water Account
- Water quality improvements to enable users to divert more water to storage during periods of high Delta water quality, reduce contaminants and salinity that impair Delta water quality, evaluate alternative approaches to address disinfection byproducts and salinity issues, and enable voluntary exchanges or purchases of high-quality source waters for drinking water uses.

In addition, other parts of the CALFED Program can provide water supply reliability and water quality benefits. These include the Watershed Program and real-time monitoring through the Science Program.

CALFED's goals for water supply reliability include:

- Increase the utility of available water supplies (making water suitable for more uses and reuses)
- Improve access to existing or new water supplies, in an economically efficient manner, for environmental, urban and agricultural beneficial uses
- Improve flexibility of managing water supply and demand in order to reduce conflicts between beneficial uses, improve access to water supplies, and decrease system vulnerability.

The CALFED Final Programmatic EIS/EIR shows that on an annual basis, without additional storage, the Preferred Program Alternative increases long-term Delta exports by an additional 250,000 to 380,000 acre-feet over the CALFED No-Action Alternative, which is similar to the PEIS No-Action Alternative. With additional storage, the Preferred Program Alternative increases annual Delta exports by 490,000 to 900,000 acre-feet over the CALFED No-Action Alternative.

On an annual basis, without additional storage, the Preferred Program Alternative increases dry- and critical-year Delta exports by an additional 50,000 to 180,000 acre-feet over the CALFED No-Action Alternative. With additional storage, the Preferred Program Alternative increases annual Delta exports from 180,000 to 670,000 acre-feet over the CALFED No-Action Alternative.

In addition, water conservation and recycling will save additional water for use. The potential for water use efficiency varies significantly in California, depending on the region of the State and the sector involved. Working with the stakeholder steering committees and other technical experts, CALFED agencies have developed ranges of estimated water savings during Stage 1 of implementation. These estimates include only water that is currently unavailable for other uses because it is lost to excessive evaporation or drains to the ocean or some other unusable destination. In addition, water can be made available through water reclamation projects. These water savings would include 520,000 to 688,000 acre-feet from urban uses, 260,000 to 350,000 acre-feet from agricultural uses, and 225,000 to 310,000 acre-feet in water reclamation projects for both urban and agricultural uses.

Actions initiated in the first four years of Stage 1 to improve storage and conveyance capacity will substantially increase water supply reliability in the later years, but these benefits will not be realized until the new facilities come on line. Similarly, it will take years to implement and fully realize the water supply benefits of water use efficiency, recycling, and other conservation measures. Therefore, the greatest challenge to improving water supply reliability lies in the first four years of Stage 1. To address these water supply reliability challenges in this short period, the CALFED Record of Decision outlines the following actions.

- Establishment of an Environmental Water Account (EWA) with an average of 380,000 acre-feet set aside annually in the first years to provide additional water for fishery purposes beyond the Regulatory Baseline.
- Establishment of a Regulatory Baseline by delineating existing regulatory requirements and clarifying implementation of specific regulatory actions.

- A commitment that there will be no reductions, beyond the baseline regulatory levels, resulting from measures to protect fish.
- Seek SWRCB approval of Joint Point of Diversion and share water derived from Joint Point of Diversion between the CVP and the EWA.
- Implement conjunctive management projects, water conservation measures, and water transfers.
- Begin implementation of storage projects.
- Allocate Proposition 13 funds dedicated to interim water supply reliability and water quality.

The CALFED ROD also concludes that these actions in the first four years are likely to improve Delta exports for CVP south-of-Delta agricultural water service Contractors, as described in the following:

> "In the first four years of Stage 1, it is anticipated that water deliveries will remain at recent levels for most water users who depend upon water from the CVP, including Exchange Contractors, North of Delta CVP agricultural Contractors, refuges, and M&I Contractors, as well as for SWP Contractors and non-project water users. It is also anticipated that implementation of Joint Point of Diversion, operational flexibility, interagency cooperation, EWA implementation, and other cooperative water management actions (some of which may require further specific environmental review) will result in normal years in an increase to CVP south-of-Delta agricultural water service Contractors of 15 percent (or greater) of existing contract totals to 65 to 70 percent. This normal year supply improvement may not be achieved in all years due to annual hydrologic variability and its impact on carryover storage conditions. Substantial progress toward implementation of other program elements, such as development of EWA assets, is also necessary. Water supplies in dry years are likely to be less than the anticipated amounts and more in above normal years. As discussed in the ROD, CALFED agencies are committed to working with local agencies to implement these regional supply actions and to support local water management actions including conservation and other local measures. Part of this effort will include development of a plan for alternative refuge supplies and conveyance."

5.5 WATER TRANSFERS

The use of water transfers to allow water trades between willing sellers and buyers is expected by many experts to be used increasingly in the future. Transfers provide an opportunity to increase or replace water supplies to support future demands. Overall, implementation of water transfer programs will meet part of the water demand that has been identified by DWR as being unmet by current water supplies. The DWR identified 2.9 to 4.9 million acre-feet of projected water demand that would not be met by existing water facilities, water conservation, and wastewater reclamation if all entitlements and water rights continue to be delivered to existing users. Water transfers can be used in the future to reduce the currently unmet future demand. Therefore, water transfers may be beneficial from a cumulative statewide perspective. However, each transfer proposal must be evaluated individually to determine direct or indirect impacts at a project-specific level.

Cumulative impacts associated with the transfer of water must consider the impacts of other water transfers that would occur throughout the Central Valley. Reclamation has purchased water in the Sacramento and San Joaquin valleys from water rights holders to improve instream fishery flows, Delta outflows, and refuge water supplies. Water also has been purchased on an annual basis by agricultural users on both the eastern and western sides of the San Joaquin Valley to improve water reliability. Water users located in the watersheds of the upper Sacramento, Feather, Yuba, and Bear rivers have participated or are considering participation in short-term water transfers of 1- to 5-year periods for water supplies and/or fish and wildlife uses. However, projects and locations have not been fully evaluated at this time.

Specific water transfers may reduce the ability of other agencies to purchase and transfer water. If the amount of water available for transfers is reduced, the users who do not purchase the water will either increase groundwater withdrawals, which may lead to increased rates of overdraft and subsidence, or purchase more expensive water supplies, which could increase the cost of agricultural crops or reduce net revenues.

Transfers of water held in post-1914 water rights must be evaluated in some type of environmental documentation. These environmental documents evaluate several issues, including the following items, which may have potential adverse impacts:

- Transfers that could reduce Delta inflow during certain critical time periods
- Entrainment losses of some fish due to diversions at new locations
- Losses of fish due to changes in flow patterns that may raise temperatures or dewater or flood spawning areas
- Reduced reservoir levels and associated recreation actions
- Reduced irrigated acreage and wetlands due to changes in water use or return flows
- Reduced employment opportunities due to land fallowing to make the water available
- Reduced groundwater levels due to the replacement of transferred water with additional withdrawals or due to reduction in applied irrigation water that percolates into the aquifer.

It has been difficult in many cases to complete the environmental documentation and obtain approval from the SWRCB, SWP, or CVP during an irrigation season in a timely manner. If these approvals do not occur in a timely manner, unnecessary water may be purchased or users may decide to defer actions that would require full water supplies.

To alleviate this issue, several programmatic environmental documents have been completed and the overall concepts are included in the long-term contracts considered under Alternatives 1 and 2. For example, Reclamation completed the Eastside/Westside Water Transfer/Exchange EA for approval of annual exchange/transfer(s) of up to 150,000 acre-feet of CVP water between CVP Contractors through an internal exchange of SWP water by the Kern County Water Agency. This approval process would be

in effect for 5 years, between March 2001 and February 2006. Specific transfers under this type of program would be compared with the specific approved actions to determine that adverse environmental impacts would not occur.

Similar programmatic approaches for approval of transfers within regional trading zones are being considered under the CALFED process and through the Governor's Drought Contingency Panel.

5.6 TRINITY RIVER STUDIES

In October 1984, the Service began a 12-year study to describe the effectiveness of increased flows and other habitat restoration activities to restore fishery populations in the Trinity River. An EIS/EIR was completed in October 2000 under a concurrent program to evaluate alternatives to restore and maintain natural production of anadromous fish in the Trinity River mainstem downstream of Lewiston Dam. Historically, an average annual quantity of approximately 1.3 million acre-feet of water has been diverted from the Trinity River to the Sacramento River system (1964-1992). A change in the Trinity River flow requirements and a corresponding change in the amount of water diverted to the Sacramento River system could affect future flows to the Delta. Changes also could affect overall water supply reliability and carryover storage in Shasta Reservoir, and water quality and temperature in the Sacramento River.

The alternatives in this EA were developed in 1999-2000, and assumed minimum instream flow requirements for the Trinity River of 390,000 acre-feet/year in critical dry years to 750,000 acre-feet/year in extremely wet years. These flows represent the initial flow recommendation in the Trinity River Flow Evaluation. That initial flow recommendation has since been refined in the Trinity River Flow Evaluation report as: 368,000 acre-feet/year in critical dry years to 815,000 acre-feet/year in extremely wet years. A Record of Decision (ROD) was signed in December 2000 authorizing the refined flow recommendation. In May 2001, a suit was filed against the decision by Central Valley water and power interests to prohibit implementation of flow–related aspects of the ROD. On July 14, 2004, the 9th U.S. Circuit Court of Appeals reversed a lower court ruling (that had halted implementation of flow-related aspects) in favor of the refined flow recommendations for the Trinity River. The Central Valley water and power users are considering asking the 9th Circuit Court to reconsider its ruling. Therefore, the flow recommendations for the Trinity River are not final.

This EA and the PEIS made assumptions about Trinity River flows for the purposes of analysis. To provide a broad range to the analysis in the PEIS, the Cumulative Effects Analysis assumed the flow of

390,000 acre-feet (driest years) and 750,000 acre-feet (wettest years). These flows are the same as those used in the Preferred Alternative in the Trinity River Flow Draft EIR/EIS.

5.7 TRANSFER OF OPERATIONS AND MAINTENANCE RESPONSIBILITIES

Several of the local water user groups provide a portion of the operation and maintenance requirements for CVP facilities that serve only that user group. For example, Clear Creek Community Services is responsible for operating and maintaining the Muletown Conduit serving CCCSD and CCSD ~~(Centerville)~~. Alternative 1 provides for this type of operations and maintenance. Any transfer of

operations and maintenance for specific facilities to non-Federal entities could be completed under Alternative 1 following completion of appropriate environmental documentation and approvals.

5.8 CHANGES IN FEDERAL PROGRAMS

The 1996 Farm Bill revised the way commodity payments are determined, and decoupled the size of the payment from the actual production level. There remains, however, some uncertainty about how the U.S. Department of Agriculture (USDA) will handle lands that are part of a grower's base acreage, yet are retired or fallowed as CVPIA is implemented. For purposes of this EA analysis, it was assumed that USDA would remove such lands from the grower's base acreage and reduce the deficiency payment accordingly. The estimates of changes in farm commodity payments are based on that assumption.

If, instead, growers who retire or fallow their land as part of CVPIA implementation continue to receive program payments associated with that land, then no savings would accrue to the Federal treasury. However, net revenues to the farmers would increase. This may lead to greater participation in the water transfer market, which may lead to a lower cost for water. Either or both of these impacts could increase the amount of water purchased by the U.S. Department of the Interior for water acquisitions. Because the 1996 Farm Bill extends for only a limited number of years, great uncertainty remains about interactions between CVPIA and Federal commodity programs.

5.9 CHANGING DEMAND FOR AGRICULTURAL PRODUCTS

The analyses in the PEIS and this EA used real 1994 prices and costs and did not attempt to estimate differential increases in prices and costs in the future. However, some evidence exists that demands for farm produce, especially fruits and vegetables grown in California, will increase in the future and cause their prices to increase faster than the overall inflation rate. If this occurs, the costs associated with acreage reductions estimated in this study are understated. Higher value for crops would increase the cost of water or reduce the willingness of sellers to participate in the transfer market. This would decrease the opportunities for Interior to acquire water for fish and wildlife purposes.

Another view is that increasing competition from expanding production regions, especially in Central and South America, will hold future price increases to below the level of inflation. Lower value for crops would decrease the cost of water or increase the willingness of sellers to participate in the transfer market. Changes in demand could change the ratio of permanent to annual crops. If more permanent crops were planted, the effects of changes in water availability on an annual basis could become more significant.

5.10 YIELD INCREASE PLAN

As part of the CVPIA, the Least-Cost Yield Increase Plan was completed to describe possible actions to increase CVP yield. The yield increase options considered in the plan ranged from purchase of water supplies, land fallowing, conjunctive use, water conservation and urban wastewater reuse, to off stream storage. New facilities, water reuse, and conjunctive use methods could reduce the shortages that are projected under the PEIS alternatives. The PEIS identified land fallowing and water conservation as measures to provide additional water supplies for fish and wildlife purposes. Implementation of water purchases for both purposes could cause conflicts, or could be implemented in a way that would benefit both programs. For example, if acquired water purchased to increase instream flows were diverted

downstream of the critical reaches and stored in an off stream storage facility, both purposes would benefit. In addition, the cost to both users would be lower.

5.11 ADDITIONAL LISTINGS OF SPECIAL-STATUS SPECIES

There is a high probability that new special-status species will be listed and others will possibly be de-listed. As listings occur, Reclamation and the Service will follow the requirements under the Endangered Species Act and conduct consultation as required. Additional conservation actions are anticipated under the Conservation Program, Anadromous Fish Restoration Program, and CALFED that will aid in ecosystem restoration and improve the status of special-status species, so the need for future listings may be reduced.